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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

JUNE 2, 1917.

REPORTS FOR WEEK ENDING MAY 26:

Akron:

We have had rain every day the past week excepting on the 23d. This has interferred with field work and very little has been done except to plant some corn. Grass and small grain are growing rapidly. Maximum temperature for the week 73, minimum 32, precipitation 3.96".

Amarillo:

Weather for the week has been characterized by strong winds, clear sky and somewhat below normal temperature for the season. Maximum temperature was 80 on the 24th, minimum 33 on the 23d. Average hourly wind 12.4 miles. Precipitation .03 inch and evaporation 2.16 inches. We are needing rain again.

Planting of sorghum crops is going on around here and the varieties have been put in on the station during the week. Thirteen different varieties of Indian corns secured by the writer from the Corn Office last winter were put in for trial and Mamoth Russian variety of sunflowers were also planted. Ground has been prepared for putting in trial varieties of Oil and Drug plant seed the first of next week. Soil sampling, hoeing out weeds too large to be harrowed out of row crop plats and rogueing out volunteer rye in winter wheat plats was done during the week. The seasons fallow plats were plowed the ground being in fine, moist condition. Rye is in flower and winter wheat is beginning to head.

Archer:

Plowing the plats for corn was finished the fore part of the week, and three plats were planted before the rain came. Nearly $1\frac{3}{4}$" of rain fell within the past thirty-six hours, and it is still cloudy and showery. Before there was abundant moisture in the ground and a small shower made it a little sticky for working. The flax was seeded, and all the winter wheat plats, except those in rotations 561 and 562--disked on oats stubble were reseeded to spring wheat. The small grains seeded two weeks ago are well up and showing good stands. The field peas seeded a week ago are coming up.

Temperatures: max. 61, on the 24th & 25th, min. 33 on the 21st & 22d means, 53 & 36. Wind velocity, 9.6. Precipitation 2.28.

Ardmore:

Maximum temperature for the week, 80, minimum 35. Total precipitation for the week, 3.91 inches. A severe rain storm commenced at six o-clock Saturday evening and rain fell continuously for forty-eight hours during which time the amount of precipitation recorded was 3.52 inches. This is practically 1.5 inches more rainfall than was ever recorded at this station in any one continuous rain. The rain was quite general over this section of the country but was probably heavier in the vicinity of Ardmore than in nearby towns. No great damage was done to bridges and wagon roads. Hat Creek, however, was entirely out of its banks and was over one-half mile wide between the station buildings and Ardmore. It has not been possible to do any field work this week and construction work has been considerably delayed.

Big Springs:

The general farm conditions remain practically unchanged from the report of the previous week. Maximum temperature 97, minimum 50, evaporation 2.64 inches, wind velocity 8.9 miles, precipitation .21 of an inch. A portion of the county received a good rain Friday evening, one farmer reporting a three inch rain at his place. At the farm the gage registered .14 of an inch. Farm work for the week has consisted of killing perrenial weeds that do so well in this section, and changing and repairing fence.

Colby:

The last two days of last week were hot and sultry, the temperature going up to 98 on Friday, but this week has been raw and cold. It has been cloudy practically all week. Over an inch of much needed moisture fell during the week. Very little growth was made by any of the crops. Corn came up on all the plats during the last few days. The prospects for winter wheat are growing less each day as the weeds are coming up thick. The spring grains are backward but promising. Owing to the cool weather the planting of sorghums has been delayed. All the plats to be fallowed this summer were plowed. The plowing was done somewhat earlier than usual becuase of the weeds which are very thick on all stubble field this year.

Weather for the week: Maximum temperature 72, minimum 38, average hourly wind velocity (8') 16.2 miles, (2') 11.4 miles, evaporation 1.093" precipitation 1.12".

Bellefourche:

The past week has been too wet for field work to be done. Even at this late date there are still a large proportion of the farmers who have not finished seeding. The lateness of the season will doubtless increase the amount of flax seeded in this section. All crops are growing very slowly. The continued cool weather is retarding the growth of alfalfa and of the winter grains. The first cutting of alfalfa will be between one and two weeks late in coming to maturity. Maximum temperature 65, minimum 32, precipitation 2.13.

Dalhart:

There seems to be no end to the cool, dry windy, weather. Maximum temperatures for the week have varied from 88 to 65 degrees and minimum temperatures from 55 to 33. The range being in all cases as much as 25 degrees and on some days as much as 40. High winds have prevailed during the entire week reaching a maximum of something over 28 miles per hour, on Friday. Spring grains which had a fairly good start were severely damaged, to just what extent it is too early to tell. Corn planted a week yesterday has not yet emerged. The greater part of the grain sorghums both on the rotations and the cooperative work and the forage sorghum work have been planted. The earlier date of seeding plantings have not come up and will have to be replanted at later dates. Prospects for a small grain crop of any kind have vanished. Prospects for row crops are getting smaller each day and are taking chances now with a more than the average rain fall later in the season. This is the latest season that we have had during the past nine years. Range grass is very short and some of the cattle men are still feeding.

Edgeley:

The weather continued dry and for the most part clear, though rather cool, while heavy winds prevailed at times during the week. All kinds of grasses, alfalfa, and the grain and flax that has been seeded during the last week or so, are badly in need of rain. Grass has made but little growth this spring, and the pastures are very short. The most of the grain however, is looking weel, and while growth has not been rapid, is not suffering yet from any lack of moisture. The flax in rotation 12 emerged the first of the week, and the most of the corn has come up during the last three days. Yesterday morning there was a frost that damaged tender vegetation in some places, but did not injure anything on the station.

During the week, the center alley on Nine running east and west, and all the alleys next the fence, were plowed, and on Saturday were seeded to grass seed. One plat each of Feterita, Kafir, Amber Cane, and Kowliang, one half in rows and one half solid with the drill, and one plat each of Sudan Grass and five varieties of millet were seeded on Nine on the 25th.

Maximum temperature, 71°, minimum 28°, precipitation, trace.

Havre:

The weather during the past week has been very typical of the wet season in this section, but with no beneficial precipitation. With a cloudy sky a large portion of the time, traces were recorded on two days and rain on two days amounting to .13". This brings the total for the month to .25". The normal from 37 years records is 1.99" and the least amount that has ever been recorded for the month of May is .42. Some localities between here and the mountains on the west have had good rain in the form of showers, during the past week. Crops in general however, look fair. The soil conditions were above normal at seeding time and the germination has been very good on old land. Sod land broken this spring is almost completely dried out and there will be very little germination under present conditions. Because of the delay in transit of seed corn from Huntley, the seeding of corn was delayed until this week. This corn was shipped from Huntley in early April and did not reach Havre until the 24th of this month. Potatoes were seeded during the week and the commercial fields of spring breaking were seeded to flax. From Havre east the sod is so dry that there is very little sod being broken. A few miles west of the station breaking outfits are still running in good shape.

Hays:

During the week the weather has been generally cloudy and cool with showers occassionally. Not enough moisture though to thoroughly wet the furrow slice of either fall or spring plowing. Showers during the week as follows: 21st, .13", 22, .28", 24, .01", 25, .02", 26, .16". Maximum temperature 86, minimum 35. Winter wheat and spring small grains are growing, but it has been most too cool for corn to make much growth. Kafir and milo is sprouting nicely. All spring small grains and peas are very weedy. It looks as if the weeds have a good chance to choke out the crops unless the latter makes a heavy and rapid growth. During the week soil moisture samples were taken on 22 kafir plats and on 10 fallow plats. Trimming of all small grain plats has been finished, and most of the roads and alleys freed of weeds. Planting of kafir on the general fields of the station is now being rushed. A small addition to the general office is being

Hays: (continued)

built. The basement and cement floorshas been finished and frame work is now being raised. Last Sunday a small cyclone destroyed all buildings on two farms about 20 miles north of Hays. The damage on these farms is said to be $10,000.00.

Huntley:

Owing to frequent showers, but little field work was accomplished during the week. Four one-acre plats on field G were plowed, disked and harrowed for corn and some disking and harrowing for corn was done on the rotations. A variety of crops for silage were seeded as were the bean varieties. All the small grains including alfalfa, sweet clover and brome grass are up with a very uniform stand. Winter wheat and rye are jointing and an occassional head has appeared in plats of the latter. Hogs on rye pasture with a 2 per cent corn ration have made an average daily gain of 1.2 pounds per pig for the first fifteen days. The lot on brome grass with 2 per cent corn made an average daily gain of .70 pound and the lot on alfalfa .90 pound, for the ten day period.

Max, temp. 75, min. 37, precip. .93 inch.

Judith Basin:

The weather has been very changable this last week, some rain falling on five days out of the seven. Maximum temperature for week, 61, minimum 35, precipitation .75 inch. The crops that were put in before the rain are up, and all the experimental plats appear to have a good stand. All seeding has been finished except the corn in the dynamite plats and the clover and alfalfa on the rotations. A good many of the shade trees on the station have been winter killed, and others have been severely damaged by the snow drifting in and breaking the limbs as it melted.

Lawton:

Variable weather has obtained during the past week. Hot, windy weather the fore part of the week was followed by one cool, cloudy day. On Friday the maximum temperature registered 93 with a strong and almost hot wind from the south; minimum was 43, precipitation ,10 inches.

Oats has shown the most marked improvement of any of the crops since the rain which fell just one week ago tonight. On most of the plats it has almost doubled in height during the last 8 days. It now looks as the most of it could be harvested with the binder. Corn has made only fair growth during the week and effects of the hot wind on Friday were quite noticeable at the close of the day. Chinch bugs still continue their damaging work. The young brood seems to be now coming on. The Entomologist who was here doing some preliminary spraying tests returned to Wellington Friday with the expectation of returning at an early date, to carry on more intensive work. A 10 per cent solution of kerosene emulsion seems to be rather deadly to the bugs but has to be applied very carefully to avoid doing injury to the plants.

Up to the present time pretty good stands of grain and forage sorghums, cowpeas and cotton have been secured on practically all plantings. Some of the varieties however, have germinated rather unevenly. Jack rabbits are doing serious damage to the soy beans. A solution of lead arsenate was applied to the plants but does not seem effective as yet.

Lawton: (continued)

During the week a hopperdozer was built for the purpose of combating the alfalfa leaf hopper. At present it is being used on a neighboring field of alfalfa on the creek bottom. This is about the only means of combating this insect and it is possible that some good may result from the use of i The hopperdozer is quite similar to the one used for grass hoppers except that canvas is used for the bottom, ends and back. This canvas is covered with a very sticky substance such as tangle foot or some coal tar preparation. As the insects fly up in front of the hopperdozer they are swept back onto the sticky canvas.

Mandan:

The weather during the past weekcontinued dry with more or less win We have had no precipitation during May and as a consequence many of the seed and cutting plantings have been postponed until the soil is in more favorable planting condition. A stock-yard corral has been constructed on the grazing tract as it has been found necessary to put up a more substantial corral in order properly to handle the steers that are being used in the grazing experiment. The steers have been weighed and placed in their respective pastures. Concrete foundation floors for the garage and soil moisture laboratory have been run in and a concrete floor is also being put down in the implement shed.

Mr. Stephens is spending some days at the station. Maximum temps; 75, minimum 28.

North Platte:

Following the good growing weather of the previous week climatic conditions for the past week have reverted to the condition which has prevailed during most of the spring. Temperatures have been much below normal and there has been but little sunshine. 1.65 inches of rain have fallen within the last 48 hours. This is the first soaking rain of the season. It brings the precipitation for May to about 25 percent above normal. Only 3.5 days of field work have been accomplished during the week. It is too cold for corn to make a start. Total precipitation of the week 2.4 inches.

Scottsbluff:

The past week has been continually cool and cloudy with an unusual large amount of precipitation. Rain fell in considerable quantities six days out of the seven, and field work has been at a stand still. The first $1\frac{3}{4}$ inches of rain were entirely absorbed by the soil but considerable run off took place during the rains Thursday and Friday and more or less damage caused to low lying fields in the valley by washing. A few plats on the Dry Land field suffered slightly in this respect by being flooded from water running down the roads. A hail storm occurred Thursday afternoon in which .5 of an inch of water fell in less than 30 minutes. Some damage was done to crops on the station and it is reported that fields 3 miles south of here were completely destroyed. While there was no immediate danger of crops suffering from drought, this week's rain is of great benefit especially to dry land crops, as the soil, previously was comparatively dry below the 2d ft. Max.66, min.32, precip.3.79",

Sheridan:

There has been considerable cloudy weather during the past week, and precipitation on 5 of the 7 days amounting to 1.78 inches, all of which was stored in the soil.

Following are the weather conditions prevailing during the week. Max. 68, min. 36, wind vel. 7.2 and evap. .336". However, there was enough favorable weather for field work to finish up all the spring seeding excepting dates of seeding. All of the plats have been trimmed which are up, so far as teams can do it, and the roads have all been disked. The fields to be summer tilled are being disked, or were being disked when we had to stop field work because of the rain, preparatory to plowing. Weeds are appearing pretty thick considering that this is the first year from sod. Soil sampling has also been in progress during the week. A concrete foundation is being poured today, for the tool room which is to be built in a corner of the Implement Shed. All necessary material is on hand for this work. The shelterbelt trees planted during the fore part of the month are leaving out nicely. Wind plum trees in this section are in full bloom, and all trees are leaving. Grass is making a rapid growth, and appears to be thicker expecially on the station than it was a year ago.

Tucumcari:

Average hourly wind velocity 10.6 miles, maximum temperature 88, on the 24th, minimum temperature 44 on the 21-22nd. Precipitation, none, evaporation 2.696 inches.

The principal work of the week has consisted of planting. The whole week has been extremely windy; on the 25th the wind averaged 25.2 miles per hour from 8 to 1. It averaged 23.3 miles per hour from 8 to 5. On the 20th the wind averaged over 23 miles per hour from 8 to 5 and 16.4 miles per hour for the 24 hour period. In spite of the excessive wind practically no soil blowing took place until the 25th and then nearly everything blew. It is quite likely that replanting will be necessary for several of the crops

Williston:

Dry weather continues. There has been only .01 of an inch of rain this month. The surface of the soil is very dry, altho below about five inches for about two and one half feet there is still a fair amount of moisture. Early seeded grain is up and thrifty, while much of the later seeded crops have not emerged, and cannot come up until it rains. Seeding is still in progress in this section, flax seeding just starting. Maximum temperature, 78, minimum 31, no killing frost. The week has been very win

Woodward:

Work is progressing nicely on the station and the spring planting is nearly completed. All of the sorghums that were planted last week are up at this time. We have had to cultivate them in order to keep them from blowing out. There was an exceptionally hard wind blowing all day Friday and all of the rowed crops were cultivated to save them. The two inside shovels were taken off the cultivator, using only the two outside ones to roughen the soil. Today is very warm and there is only a slight breeze

Woodward: (continued)
stirring. The last date of cotton was planted today, '26th', also the variety cotton and the cooperative series.

Mr. Chilcott left for Lawton last Monday to investigate the chinch bug infestation at that place. He returned to Woodward Thursday night. We have seen but very few chinch bugs in the wheat on the station. There has been no hatching of them that was noticed. The work on the teamster's cottage is progressing nicely. Weather report: Evaporation 1.961, Maximum for week, 85, minimum 40, average hourly wind vel, 11.3 mi.

The following memorandum dated May 19, 1917, has been issued by the Secretary of Agriculture and is quoted below for the information of the field men of this office.

"The attention of administrative officers is invited to the fact that carelessness on the part of employees has resulted recently in numerous losses of unused passenger transportation requests. As the Department (and indirectly the employee to whom a request is issued) is responsible to the transportation company for the value of the ticket issued on a request, even though the request be presented by an unauthorized person, action should be taken at once to impress upon all employees the necessity for exceptional care in the handling of unused requests. In the event of loss of a request, the fact should be immediately reported to the Office of Inspection of the Office of the Secretary in order that notices may be sent out to the traffic associations. No attempt should be made to use a request, the loss of which has been previously reported; such a request, when recovered, should be promptly forwarded to the Office of Inspection for appropriate action."

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BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

JUNE 9, 1917.

REPORTS FOR WEEK ENDING JUNE 2, 1917.

Akron:

The past week has been very wet and no field work was done except on Tuesday when we planted 1¾ acres of potatoes. Fields were in fair condition to work on Wednesday but a rain of 1.59 inches Wednesday night followed by 1.50 precipitation on Thursday, part of which was snow, and .09 inches Friday have left the fields very wet. Some hail fell on Wednesday and the small grain is badly bruised but not seriously injured. The precipitation for May was 7.82 inches, the highest precipitation recorded for a calendar month, at this station. Maximum temperature for the week 69, minimum 32, precipitation 3.19 inches.

Amarillo:

Row crop planting on the station for the season was practically completed this week. On the D. D. A. plats the corn and milo came up 10 days after planting. The kafir after 14 days since planting is just now beginning to emerge. Continued dry weather and below normal temperature conditions together with prevailing high winds are telling on the crops. The leaf ends of the small grains are tip withered and frayed and in general these crops give the appearance of needing rain. Winter wheat at a height of 18 inches is heading out. The spring small grains at a height of from 12 to 16 inches are heading or just beginning to head. It looks as if but few if any of these will be worth harvesting. The rye and peas for green manure are now being plowed under, rye looks thin and has reached a height of only 28 to 30 inches. The peas also have made a poor and scanty growth, being now in blossom at a height of 6 to 8 inches. Under the circumstances weeds are not so far giving us much trouble to control. The ground squirrels are rather worse this year than usual about digging up corn and milo making it necessary to do some replanting in places. A round of soil sampling in the new crop plats has been conducted and in most of the plats the reserve supply of moisture is small so that crops in order to make good will require considerable of rain from now on. Mr. Blaylock, building inspector for the office, stopped over between trains May 30th, on his way from Woodward to Dalhart. Weather for the week was, maximum 84 on the 27th, minimum 35 this morning, hourly wind8.8 miles, precipitation .02" and evaporation 2.079",

May weather summary:

Max. temp. 89 on the 18th, avg. max. 70. ten year normal 78.
Min. " 25 " " 7th, avg. min. 45 " " " 50.
Average mean 58, ten year normal 63. This has been the coldest May on record. Total wind movement 2ft. anemometer 6864 miles. Hourly wind velocity 9.2 miles. Nine year normal 9.2 miles.
Precipitation 2.83 inches. Station normal 2.51, 37 yr. W. B. 3.42
Evaporation 6ft. tank 7.623 " ten year normal 8.915 inches.
" 8ft. " 7.577 "
Vapor pressure, average readings for month .233, ten year normal .290.

Archer:

The corn was planted this week except plat F of the M. C. series. This has not yet been planted because of water standing on the edge of it and in the road adjacent. This road, being on the near side of the field, is much used and blown out by the wind, leaving it low. Where water does not stand the soil here becomes tillable very soon after a heavy rain. Flax seeded May 23, and wheat seeded May 24 on the winter wheat plats have not yet appeared, due to the lack of warm weather and sunshine. Alfalfa seeded May 15 is starting to come up, but brome grass seededthe same day is making no appearance. Field peas seeded May are up and show a good stand. The winter rye, brome grass, and alfalfa are making good growth. The second shallow sampling was done today. There has been some precipitation every day this week. Thursday it was in the form of a light snow, which continued all day, but melted as it fell. It froze ice that night and icycles remained until nearly noon. Temperature maximum 57, minimum 30, means 30 and 35, precipitation .91".

Ardmore:

Maximum temperature for the week, 54, minimum temperature for the week, 33, total precipitation for the week, .62. The total precipitation for the month of May was 5.34" the total precipitation for the same month in 1915 was 3.40 and in 1916 3.61. The four year normal precipitation for the month of May is 2.57 inches.

The spring is exceedingly late, and native vegetation has only recently begun to make an active growth. Very little corn or forage crops have been planted in this section, and it seems that the acreage of these crops will be considerably decreased, and this is due to the fact that we have had considerable wet weather for the past two months. It may also be stated that theacreage of small grain has been materially decreased in Fall River County for the same reason. The Superintendent of this station is endeavoring to induce the farmers in this locality to seed as large an acreage of corn as possible. Something like 5000 lbs. of Dakota Amber Sargo seed has been distributed among the farmers in small amounts. Some of the farmers have experienced considerable difficulty in obtaining seed.

The construction work on this station has been considerably delayed due to the exceedingly wet weather, but this work is now progressing at a very satisfactory rate, and all new buildings will be completed and ready for occupancy on June 30. Authority was granted recently, for the erection of a new bunk house, which is now in process of construction. Arrangements have been completed for a beef cattle pasturing experiment which will be commenced within the next few days. Mr. John T. Sarvis is expected to arrive at this station within the next two or three days to make a study of the native vegetation in the pasture which is to be used for beef cattle.

Big Springs:

The week has been a period of relatively high winds movement and excessive evaporation. Maximum temperature 98, minimum 51, wind velocity 9.1 miles, evaporation 3.30 inches, precipitation .08 inches. The weather remains very dry and we need one of the proverbial downpours to relieve the situation. Precipitation since Jan 1st, by months is as follows:

Year 1917, Jan. .28, Feb. 0, Mar. .03, Apr. .97, May .61, total 1.89
17 yr. ave. " .33 " .65 " .71 " 2.03 " 2.49, " 6.21

By comparing the above figures and totals an idea can be secured of the conditions prevailing in this section. Some parts of the county have received some fairly good showers, though they have been local in character and have done little good. We will cut the winter wheat in the c.c. series next week, and despite the fact that less than three inches of rain has fallen since Nov. 1st, we will get five or six bushels per acre on plats B, E, and F.

Colby:

The last week has been cool, cloudy and rainy, rain having been recorded every day and the temperature not having gone above 80. It is raining today and growing colder with indications for a frost as soon as the clouds clear away. Things are growing very slowly. The spring small grains which had sufficient moisture for germination at the time of seeding and the winter wheat and rye began jointing about the middle of the month but have made little headway. Surface planted corn which was up a week ago has made practically no growth, and listed corn is coming up very unevenly. The sorghums on the plats were planted this week. The ground was in better shape for the seeding of these than during any previous year since the work was started here. If the cold weather persists much longer, however, the chances of getting a stand are poor as the ground is not very warm. Russian thistles are thick everywhere where the ground has not been cultivated. The winter wheat fields are becoming very weedy, and the prospects for a crop are not as encouraging as a month ago. Only three plats, wheat stubbled in after spring wheat and after milo, and on fallow with a top dressing of straw, are showing fair stands. Weather for the week, maximum temperature 78, minimum 38, average hourly wind velocity, (2') 9.0 mi. (8') 13.3 mi., evaporation 1.189" precipitation.72". Weather for May: maximum temperature 98 on the 19th, minimum 24 on the 7th, last killing frost (25) on the 8th, last freezing temperature (32) on the 11th, precipitation 2.01", average 2.33", 1916, 1.33, days on which precipitation was recorded 20. Precipitation from January 1st to June 1st 4.55" average 6. 21", 1916 4.29".

Dalhart:

Practically all of the row crops were planted the first part of the week but germination has been slow on account of the cool weather which has prevailed. The corn is up with a good stand but grows rather slow. The following is a brief summary of the weatherduring May as compared with last year:

	1916	1917
No. of days having minimum temperature of 45 or below	10	20
" " " " maximum " " 85 " above	14	4
Precipitation	.69	2.60
Wind velocity, miles per hour	9.80	9.50

The small grains which were damaged by the high winds a week ago have not recovered. Considerable work is being done to increase the crop acreage in this locality this year, especially since the recent rains. The increase in acreage will probably be about 15% more than last year. Maximum temperature for the week 84, minimum 38, precipitation ,90.

Edgeley:

With the exception of a light shower on the 29th, the week continued dry and mostly fair, although cool the most of the time. There were also heavy winds for three days during the middle of the week. Crops have been growing very slowly. The grain has a good appearance, except in some spots where the soil is poor and would naturally dry out first. The most of the grass, clover and alfalfa is making but little growth. The greater part of the winter rye too, is poor. This crop is now in the boot, but while there are some good fields, it is doubtful if the most of it makes more than a partial crop. The fall was quite dry for the fall seeded grain, and the continuation of the dry weather this spring has prevented a good growth. Through this locality too, there was seeded more rye than usual. That seeded in stubble seems to have come through the winter better than that on the plowed land. Practically all of the red clover and the slender wheat grass seeded in plats on 9 killed out, and have been reseeded. The corn was harrowed once during the week. All of the plats have also been lined up. The climatic records for the month show the third highest average maximum temperature for the month for the last eleven year, 67' as against the average from 1907 to 1916 of 65'. At the same time only two years of that period show a lower average minimum temperature for May, that this year being 36', and the average for the period 40'. The mean temperature for the month was one degree below normal. It has been the driest May on record here, excepting that of 1901, the precipitation being only .22". The average for the period 1901-16 is 2.87". Maximum temp. for the week 71', minimum 28', precipitation, .16".

Garden City, Report for week ending May 26:

The weather for the week was rather cool and favorable for the growth of small grains. Maximum temperature for the week 79, minimum 38, evaporation 2.040", wind vel. 2ft. ane. 12.6 mi., 8ft. ane. 18.2 mi., precipitation, .25".

Practically the entire week was spent in the field planting the rowed crops. During the week there was planted on the Dry Land Project 53 plats of dwarf kafir; 5 plats of milo, one plats Red Amber sorgo, two plats sudan grass, three plats of cow peas, six plats of beans and eleven plats of millet. There is such a large acreage of beans being seeded in this section it was thought advisable to do some experimental work with this crop. The varieties selected were the Mexican Pinto bean, the Yellow Teperay and the White Teperay. The first two named varieties were each planted in lister furrows and surface planted on sp ring plowing. The White Teperay bean was surface planted in rows 44 and 22 inches apart. The Mexican Pinto bean is the one being generally used for planting this year in this vicinity. An excellent stand of corn was secured on all the plats but owing to the cool weather is making very slow growth.

Garden City, Report for week ending June 2:

The weather during the week continued cool, and this morning, the 2d a minimum temperature of 35 was recorded at the station. A number of people reported the presence of frost on the ground early this morning but no damage was done. Some of the sorghum crops planted last week are beginning to emerge but it is too early to tell anything about the stand. It would not be surprising if the cool weather we have been having does not necessitate considerable replanting as a considerable part of the acreage to be devoted to sorghum crops has already been seeded. If much reseeding needs to be done, in some of the southwestern counties it is doubtful whether there will be seed enough to do this work. Potatoes on rotations 37 and 321 are coming up very slowly, while home grown Early Ohio seed planted on the moisture reduction plats are all up and making a good growth. The seed planted on rotation 37 and 321 is Early Bliss Triumph secured from a local seed dealer. During [illegible] week the remainder of the Seed Bed plats and the moisture Reducti[illegible]ts were seeded. Summary of climatic data for May. Max, temp. for month 93, min, 27, average max, 69 which is 8 degrees below the 9 yr. avg. for May. avg. min. 44. Killing frosts occurred on the 4th and 7th. Wind velocity 2ft. ane. 9.5 mi. which is 1.4 mi. below the 9 yr. avg. for May, avg. wind velocity 8 ft. ane. 13.5 mi. Max. avg. wind vel. 8 ft. ane. 24.2 mi. on the 15th. Total evaporation for month 7.468 in. which is 1.234 in. below the 9 yr. average for May. Precipitation 3.27 in. which is 1.08 in. above the 9 yr. avg. for May.

Havre:

Weather conditions during the past week have been generally threatening rain, but there was only .25" recorded on 2 days with traces on 2 other days. Temperature have been generally low with a minimum of 25 degrees on the night of the 30th. This low temperature seems to have been general throughout the community as there are numerous reports of ice $\frac{1}{4}$ inch thick. Aside from the more tender vegetables and possibly the small gruit the damage seems to have been slight owing perhaps to the dry condition of the atmosphere. Oats, alfalfa and flax, that was through the ground, were wilted the following day, but have apparently survived with slight damage. All crops are growing slowly, and the spring grains are stooling but little. Alfalfa, and sweet clover are showing indications of bloom at a height of less than a foot, while rye is in the boot at a height of about 10 inches. Brome grass is beginning to suffer from drouth. From 37 years records the weather conditions during the past May seem to have been among the most adverse. From the 14th to the 16th the weather was warm and windy, there having been but once when a higher temperature was recorded in this month. The total precipitation for the month was .42" which is as low as has ever been recorded, May 1897 being the same amount. A minimum temperature of 25 degrees is certainly unusual for the latter part of May, so we have the extreme conditions of heat, drouth and cold. Beginning from 15 to 20 miles west and extending to the mountains approximately 100 miles rain has been general and crop conditions are reported as very favorable. Soil samples from the plats show that there is a fair amount of water on land cropped to small grain last season to a depth of from 18" to 2', while on fallow and corn land

Havre, (continued)
there is a fair supply to a depth of 5 feet. The following shows the monthly precipitation as recorded here, with the normal for each month since January 1917:
January 1917 .51, normal .76, Feb. '17 .20, nor. .47, Mar. '17 .07 nor. .51, April '17 .86, nor. .89, May '17, nor. 1.99. Total, 1917, 2.06 nor, 4.62.

Hays:
The week has been, generally, cool, with couple real warm days thrown in to break the monotony. Cloudy and showery most of the week. Rain was recorded on five days giving a total precipitation for the week of .80". Max temp. 82, min 36.5. Work done during the week consisted of soil sampling when weather permitted, setting of most of the permanent or labled stakes, making and painting of some new stakes, cultivation of corn on reserve plats, and cultivating to kill weeds around fe and in roads. Also some nitrate determinations were made. Mr. S. E. Salmon from the Agricultural College is visiting the station today.

Lawton:
The most favorable weather for the production of crops that we have had this spring obtained in this vicinity during the past week. A torrential rain of 2.92" accompanied by an extremely high wind occurred on the night of the 29th. This storm was rather local as no rain was reported about 10 miles south of Lawton and about 15 miles north. The storm seemed to have centered in the business section of Lawton damaging business blocks to the extent of about three or four thousand dollars. No damage whatever occurred on the station. This rain will be of inestimable value to all cultivated crops, grass lands and gardens. The percent of run off was extremely high and resulted in a much needed supply of stock water. On account of the rain we were not able to do any field work with teams until Saturday. All of the listed plats containing kafir and milo in the permanent rotations were badly washed which made it necessary to replant parts of the rows by hand. This was done on the 2d. M.C.F. Kafir and Milo and M.C.A} B, and D Feterita which were just emerging after the 2d. planting were completely buried with washing soil. The third planting on these plats was made on the 2d. Cotton in the date of planting test, planted on the 25th, of May will also have to be replanted. During the week the broom corn plats were thinned to a stand of one and two plants every nine inches. On the second the cotton on the permanent rotation plats was thinned to a stand of one plant every 14 inches and immediately cultivated. All of the kafir milo and cowpeas on the rotations was harrowed on the 2d. Maximum temp. for the week 93, min, 46, avg. max. 82.8 avg. min. 56, precipitation for the week, 3.00 inches, total precip. for May 4.35", normal precip. for May 5.16". Winter wheat is beginning to turn and the winter barley seeded in the rate and date test will be ready for harvest within a few days.

Judith Basin:

The cool weather and rain that characterized last week, continued this week, making field work impossible until Saturday. About a foot of snow fell on the 29th, and 30th and some of the new tender growth of the shade trees was killed on the night of the 29th., when the thermometer went down to 19 degrees above zero. If the cold damp weather continues, there is some danger of the corn rotting in the ground. It has been planted over a week now and for the most part has not yet sprouted. The clover and alfalfa plats were planted Saturday, and this completes the seeding of the rotation plats. The corn on the dynamite plats, about 20 acres of oats and barley, and about 20 acres of alfalfa remain to be seeded at the station. Maximum temperature for week 65, minimum 19, precipitation 1.59 inches. The precipitation for May was 2.84", which is .27" more than the average of the years from 1909 to 1916, inclusive.

Mandan:

One third of an inch of rain on the 29th was the only precipitation that we had during the month of May. Since this rain all available men have been used in lining out cuttings for shelterbelt trees, as the cuttings could not be kept heeled-in much longer without considerable loss. If the dry weather continues another week a very poor stand of cuttings will be obtained. The cultivators have been kept busy during the week. All roads and alleys have been gone over thoroughly. The concrete floor in the implement shed has been finished. Mr. A. C. Dillman, of the Office of Alkali and Drought Resistant Plant Breeding Investigations, is spending a few days at the station looking after the planting of the millets and sorghums. Max. temp. 71, min. 28, precipitation .35".

North Platte:

The week closes with the first day of sunshine for the period. Pastures, alfalfa and grain crops have made a good growth but the continued cold weather has been very unfavorable for corn. Soil has been washed down into the bottom of the listed furrows and it is not unlikely that some replanting will have to be done. May weather summary. Mean max. temp. 62, mean min. 42, mean temp. 52, normal mean temp. 59, precipitation 4.02 ", excess precipitation 1.17", evaporation-table 5.026", rainy days, 21.

Scottsbluff:

The weather has been cool and stormy during a greater part of the week and very little field work was possible. The three sorghum plats on the rotations were seeded Monday and Plat C Rotation 11 reseeded to clover. With the exception of the variety tests of potatoes, sorghum and beans, all seeding on the Dry Land field is completed. The instruments for taking the climatic observations were moved during the latter part of the week to a more favorable location, west of the farmstead. Max. temp. 72, min, 34, precip. 1.02", considerable snow fell Thursday morning. Mr. W. W. Burr, visited the station on June 1. Mr. George Neuswanger, a graduate of the University of Nebraska, arrived June 1 to take charge of the live stock work at this station.

Sheridan:

Wet weather has been the principal feature of the past week, it having rained on 5 of the days, which moisture added to that which has fell since the 18th, made it too wet to do field work. Snow fell on the night of the 29th followed by a frost, on that night and the 30th. As corn was just coming up, the tips were frozen, but it is coming on. It has cleared up now and crops are making very rapid progress. All of the small grain plats, with the exception of one or two varieties, are stooling and thickening so that the stand looks very good. All of the alfalfa brome grass and sweet clover seeded about the 11th is up and shows a very good stand, if anything too thick. The ends of all the plats which are up have been trimmed, and the roadways cleaned up. The stakes for marking plats were put on the rotation field yesterday. During the month of May 3.84 inches of rain has fallen, which is 1.10 inches in excess of normal. All of this rainfall has been saved, in both [illegible]d plowed land. Grass on the range is making a rapid growth. Weat[illegible]r the past week has been as follows: max. 65, min, 31, ave. wind, 5. mi. evaporation .743, and precipitation .20 inches.

Tucumcari:

Varying winds and few clouds. Average hourly wind velocity 7.9 miles per hour. Wind averaged 21 miles per hour afternoon of 29th, stiff breezes nearly every day of week. Highest temperature 85 degrees on the 26th. Lowest temperature 40 degrees on the night of the 1st-2d. Precipitation, none. Evaporation 2.668", we have now had three and a half weeks without any precipitation and it is beginning to get dry. Sand has blown considerably on both fields on the station. The crop field was in good shape but was started blowing from a neighbor's field. Over half of this field will require replanting when rain comes. Portions of the upper field have blown badly but unless it becomes much worse not over 10 or 12 plats will require replanting. Except for cowpeas and the small grains all crops on the rotations are standing the blowing alright. Our 4 plats of alfalfa have been covered more or less with sand and it will be a problem to cut it. Precipitation for May 1.82 inches against an average of 1.49 inches for the same period. Farmers are still plowing their land for crops. The only advantage I can see of plowing this lste is to destroy the weed growth and check blowing. At the same time however, they are letting all the moisture evaporate from the ground.

Williston:

Dry weather continues, slightly relieved the past week by .07 precipitation. This makes only a total of .08 inch of moisture in the month of May, the dryest on record. Early seeded crops still seem to be doing well, however, the later seeded grain is germinating only in spots or not at all. In the northern end of the county many farmers are beginning to drill flax into their late seeded wheat fields. Maximum temp. 74, min. 30, on June 1. This frost injured much of the fruit in blossom also garden stuff and whatever corn and potatoes were up.

Woodward:

The past week has been quite changeable. It has either been windy or cold all week, the windy weather predominating. Crops are looking good with the exception of a few plats of oats and spring wheat. From the present indications the oats will be a failure excepting on the fallow plats. Corn, Milo, Broom Corn, Kafir and Cane are all up to stand and if we do not get some exceedingly hard rains to wash them out there will be no need of replanting any of them. We are terribly in need of rain to fill out the wheat. Our total rainfall up to date is about three inches.

Blaylock left Tuesday for Dalhart where he will be engaged in building on the station. The work was well under way on the teamster's cottage before he had to leave. The flag pole was erected Monday afternoon and the guy-ropes left on until today so as to al the concrete plenty of time to set. The height of the pole is 48 above the surface. Old Glory was hoisted to the top this morning. Weather report, max. temperature for the week 84, min. 42, average wind velocity, 10.5, evaporation 1.461.

Dickinson:

With the exception of 1901, May this year was the dryest on record for Dickinson. The total precipitation for the month was .35". The 23 year average for May as given in Bul. 110 N. D. Exp. Sta. is 2.57". On May 31st .2" of rain and snow occurred. Continuous dry weather is beginning to effect the crop growth to some extent. Winter rye is heading lower than usual. On the morning of June 1 a minimum of 28 was recorded and observations indicated that all corn and beans already up were frozen. The rotation corn had been up for about ten days.

Messrs. Stevens and Cobb were visitors at the station on June 2d.

Huntley:

Continued wet weather has permitted but little field work this week. On May 30 and 31 precipitation in the form of snow and sleet which amounted to 1.30 inches fell, The mercury fell to 28 degrees above zero but little or no damage was done apparently. The cool weather has retarded crop growth on everything except rye which is now fully headed. Potatoes were planted early in the week and corn ground on field G was harrowed preparatory to planting; plowing for corn was started on the rotations but had to be discontinued until the soil dries out a little more. As yet no corn has been planted. Max. temp. 66, min. 28, precip. 1.57.